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ABSTRACT

A 1987 project to develop materials for computer-assisted instruction in Thai and Indonesian and to train teachers in their use is described. Three different sets of Thai materials based on authentic materials were developed and field tested. One concerned the layout and function of a Thai monastery compound, another was an advanced exercise in Thai political science, and the third was an exercise in Indonesian-to-English translation from taped speech, a format selected from three that were field tested. The Indonesian test development and teacher training workshop occurred during the 1987 Southeast Asian Studies Summer Institute (SEASSI). The final project report gives an overview of the project and its results and contains more detailed appendixes. The first outlines the formative evaluation of three types of Indonesian tests (a vocabulary drill, interactive exercise in translation from taped speech, and interpretation of a spoken narrative) and describes the SEASSI teachers' workshop. The second appendix contains a dot-matrix printout of artist's drawings used in interactive lessons on the Thai temple complex. Appendix 3 contains a summary of the listening proficiency examination's development, reprinted from a journal article. The fourth appendix is a reprint of a book chapter describing the Northern Illinois University's Foreign Language Instruction Station (FLIS) instructional computer network. (MSE)

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FINAL REPORT

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Grant Number and Program: G00 ~~864037~~

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1. Introduction

The goal of the project was two-fold:

1. To create a series of advanced CAI lessons in Thai and Indonesian.
2. To conduct a 5-day teacher-training workshop of SEASSI to introduce the new technology and materials.

The project materials and various lesson designs were field tested and, in some cases, upgraded, in trials by students and SEASSI instructors. An outside evaluation was conducted by Prof. Peansiri Vongvipanond, Chair of the Department of Linguistics, Chulalongkorn University, Bangkok, Thailand.

2. Development of Thai CAI materials.

Three different sets of Thai CAI materials were developed and later improved after field testing with a limited number of students. They were all based on "authentic" materials, i.e., materials written in Thailand for Thais.

A. "Our Temple"

Description, layout, and function of a Thai monastery compound. This set was based on an illustrated book of that title and was chosen because of the central importance of Buddhism and the rituals that take place in different areas of the monastery. The original lesson design included oral presentation of a long stretch of text followed by a series of aural questions based on the text. The oral presentation was preceded by a listing of as many as 40 vocabulary items in Thai

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orthography and English definitions which were also pronounced item-by-item via Instavox recordings. The student could not read the text on-screen, but rather listened to it in keeping with the premise of the comprehension approach to foreign language acquisition. In place of on-screen text, the student saw a picture of a temple structure (e.g., the ordination chapel) or activity (e.g., monks eating their pre-noon meal) while listening to explanatory or descriptive information. A series of true-false, yes-no, short answer questions followed. Statistics of the students right-wrong responses were reported at the end of each lesson/session.

A graduate student of advanced Thai was asked to use the first series of lessons. He found that the chunks of information he heard were too long or too much to remember by the time the questions were presented. On the positive side, he liked the lesson-opening presentation of the vocabulary and ability to access it later on demand. This series then was redone in smaller immediately interactive chunks, i.e., 2-3 utterances followed by 1-2 questions. Then, after the questioning session, the entire stretch of utterances was played again for listening only -- no follow-up questions. This final design has proven highly satisfactory among students (and SEASSI instructors) who have used it. A printed version of the text and glossary has since been prepared in xeroxed form for home study. It was used in the SEASSI 1987 Thai class and is now used by students at NIU and Berkeley.

B. Advanced CAI Exercise in Political Science

Because a good number of our advanced students major in political science and often do field research on the bureaucracy, it was decided to use official documents written in "bureaucratese." We chose an authentic Thai document on official government policy concerning development. It was signed by the then Prime Minister of Thailand and published in the National Gazette. Unlike the materials developed on the Thai temple complex, these had no pictures. The student was given intensive

practice in vocabulary in context provided by audio and video. Much of the formal lexicon used in government documents are Pali-Sanskrit in organ and difficult to pronounce, hence recall. The graduate students who used this set of materials found the ability to have difficult words repeated over and over at their simple pushing of a repeat key (R) a great learning assist. The quiz at the end of each section providing them immediate feedback was another positive feature. The fact that they were dealing with authentic government documents provided both an enticement and a challenge.

C. Lesson Types in Indonesian and Their Formlative Evaluation

Advanced and intermediate students in Indonesian (SEASSI 1987) volunteered to use and evaluate three lesson types:

1. Vocabulary drill: 15 items to be learned.
2. Interactive story: brief story to be translated into English.
3. Hyperspeech story: student enlists dictionary, grammar, cultural aids in understanding a chunk of spoken narrative.

Results showed that students found type 1 ineffective. Types 2 and 3 were both well-received, but the hypertext format proved to be a bit more difficult for a few students, largely because of the increased complexity of the system, which will be streamlined in on-going projects.

Pre- and post-tests of comprehension were given for each lesson type. Testing was conducted in English so as to reduce likely errors in the second language because active productive competency in demonstrating bare comprehension would be lower and cruder than simply stating in English what was understood (or not). Students found that pre- and post-testing actually helped them to focus their learning. Facility in comprehension decreased as chunks played became larger - a function of linguistic complexity and short term memory limits. In general, translation into English was a

very useful evaluation procedure. Paper and pencil were used. Likewise the availability of English translations during the lesson (learning to comprehend) was a positive factor. Short multiple choice questions embedded in lesson types 2 and 3 were recorded on the computer and registered on-screen. Student feedback on this type of interactive questioning was positive. Close tests were employed, but did not work well.

The details of this part of the project have been written up in Appendix I of this report.

3. SEASSI Teacher-Training Workshop with FLIS

Several weeks prior to the conclusion of the ten-week SEASSI, the supervisory teachers of most of the language classes met with Professor Hartmann to receive brief training and exposure to CAI using the NIU FLIS. In order to do something worthwhile, we developed a simple, proficiency exam of listening comprehension. The primary function of the exercise was to introduce language teachers to new technology in the hope of spreading its acceptability and use in the future. At the same time, we were also sincere in wanting to see if the FLIS would be a reliable instrument for testing listening proficiency. As rough means of testing the validation of the exams for each language, we asked the teachers to rank their students from high to low, and we compared their assessment with the computer results. In general, there were strong positive correlations, and we feel that with further refinements we could use the test to great advantage. Several students commented that they liked the content and style (social situations) as a learning experience itself, testing aside.

Conclusions and Future Directions

In all, the project was highly successful in terms of developing new CAI materials for advanced students of Thai and Indonesian. Beyond simply developing new materials were the more interesting experiments in formative evaluation of lesson types by students and the development and use of a listening comprehension exams in the major languages of Southeast Asia.

Hardly had the project come to a conclusion when we found that the computer equipment (Apple IIe) we were using had gone from state-of-the-art in 1983 to obsolete in 1987. We have since moved to an IBM-PC environment with advantages too numerous to mention. With new funding, we will move the lessons to the IBM system and greatly update software for preparing lessons in hypertext.

Dissemination

The results of our work have been published in the COTSEAL Bulletin (1988), Foreign Language Annals (1987) and in a collection of articles in a volume entitled Modern Technology in Foreign Language Education. In addition, the FLIS system has been demonstrated by the authors at The Foreign Service Institute, University of Illinois-Urbana, and University of Hawaii.

Explanation of Appendices

Appendix I: Describes in detail the formative evaluation of Indonesian lesson types and the SEASSI teachers workshop for developing a listening proficiency exam.

Appendix II: Dot matrix printout of artist's drawings used in interactive lessons based on the Thai temple complex.

Appendix III: Results of the listening Proficiency Exam developed by SEASSI teachers and published in the COTSEAL Bulletin.

Appendix IV: Dissemination: Offprint of "FLIS: Random Access Audio and Innovative Lesson Types" published in Modern Technology in Foreign Language Education. Edited by Wm. Flint Smith. Lincolnwood, Illinois: National Textbook Company.

Appencix I

A Description of
Development of and Formative Evaluation Activities for
CAI Lessons for Foreign Languages
Conducted During the
1987 Southeast Asian Studies Summer Institute

compiled by
George Henry
September 24, 1987

This paper describes activities conducted during the summer of 1987 involving the development and evaluation of Computer-Aided Instruction (CAI) lessons for foreign languages. The lessons were developed under a grant* from the U.S. Department of Education, with additional funding and resources supplied by the Southeast Asia Studies Summer Institute and Northern Illinois University.

PART I - Environment and Personnel

A. FLIS: The CAI materials under evaluation were produced to run on the NIU FLIS (Foreign language Instruction Station) system. The FLIS system features a set of networked computer stations, each of which has an Instavox Random Access Audio unit associated with it. The Instavox allows interactive recording and editing of audio segments ("speeches") during lesson preparation, and instant playback of any recorded speech at any time during the use of the lesson. In short, any lesson which features an audio component is not limited to a preplanned rigid sequence of speeches, but may be designed to react to events occurring during the lesson (such as learner choice or the correctness or incorrectness of the learner's response to a question).

Further details about FLIS, its underlying philosophy, and the basics of the lesson types used can be found in "Computer-Controlled Random Access Audio in the Comprehension Approach to Second Language Learning" which is attached to this paper as an appendix.

B. STUDENTS: The lessons being evaluated were taken by a number of students from SEASSI - Southeast Asian Studies Summer Institute. SEASSI is run by a consortium of U.S. universities, and each summer brings together about 30 teachers (mostly from Southeast Asia) and over a hundred students (mostly from the U.S.) to teach approximately a dozen Southeast Asian languages and the cultures of the area.

The students are selected by the SEASSI board on the basis of ability, interest in a field relating to Southeast Asia, and projected ability to benefit from the instruction at SEASSI. Most are graduate students or advanced undergraduates, and most may be described as highly motivated.

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Those who took the lessons were volunteers from the intermediate and advanced Indonesian classes. It might have been preferable to ask the language teachers to require these lessons as part of the SEASSI course, but this was not practical for various reasons. Those who volunteered might be imagined to be more highly motivated than even the average SEASSI student, and to be favorably inclined to CAI. However, as analysis of their reactions will show, there were a few among them who were highly critical of one aspect or another of the lessons, and most had at least a few suggestions and criticisms to offer.

One additional factor that should be noted is the great amount of work and intense pressure that these students experienced. Language classes were held 4 hours a day, five days a week for 10 weeks, with daily homework assignments. A typical class had 4 to 5 students. Most students took additional coursework such as anthropology classes. They came to take the CAI lessons, then, after 4 to 6 hours of intense instruction and recitation, usually on a day where the temperature was above 90. These were not optimum conditions for learning, and might well have reduced any possible predilection toward high motivation and interest. However, since participation was voluntary, the only motivation involved was intrinsic: no extrinsic motivation was offered. It should be noted that we owe them special thanks for their interest and efforts under difficult circumstances.

Because of the fact that participation was voluntary, the number of students taking the lessons was rather small, ranging from 9 down to 3 for particular lessons. Thus conclusions for individual lessons, in some cases, must be tentative. However, 9 different lessons were taken for a total of 50 student-lessons, so conclusions for the system as a whole can be relatively firm.

C. STAFF: The activities were directed by G. Henry and J. Hartmann. Most of the work of lesson development and administration of the lessons on a daily basis was done by student workers, trained and managed by Henry and Hartmann. If the FLIS system is to become an operational success, it is important that people can be trained to create lessons for it and to run it. A later section will deal with these questions.

Part II - Goals

The FLIS system has as one of its primary goals the presentation of instruction which allows learners to practice and improve their listening comprehension of foreign languages, and to build their passive vocabulary, in an effective, interesting, and rewarding way.

In connection with this, a specific goal of our

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activities this summer was to devise workable testing procedures to determine if, for a given lesson, the student had

a) understood the special vocabulary presented in the lesson
b) understood representative speeches well enough to explain or translate them
c) had understood the content of the story well enough to summarize the story and
d) had understood the story well enough to answer questions involving inferences.

It should be noted that this is a difficult problem, since comprehension is essentially an internal mental state. We must ask the student to perform some action in order to assess the degree of comprehension attained, but we must try to ensure that a wrong answer (action) is not due to the inability to perform the action when comprehension was, in fact, attained. For this reason, most questions are posed in English and most responses are given in English.

In addition, we wanted to determine which (if any) of the lessons were perceived by students as interesting, effective, and useful. A questionnaire was given to each student after each lesson in order to obtain reactions. In addition, free-form comments were requested on these forms, and verbal comments were also sought. In some cases, suggestions for improvement were incorporated in lessons under development.

Part III - Lesson Type Comparison

For the first three weeks of the study, each student was to take 3 lessons: one of each of the major types developed so far. More extensive descriptions of these types can be found in the appendix(the FLA paper), but briefly, they are:

a) Vocabulary drill: 15 items are to be drilled until learned. A pre-test is first administered in which each item is played (spoken) once: the student is to write the word's English meaning. Then the drill lesson begins: each word is introduced with its English meaning displayed on the screen; then the items are practiced randomly until the student feels he has learned the words and wants to stop. Then a post-test identical to the pre-test is given.

b) Interactive story: A pre-test is first administered in which sample vocabulary (both word and sentence level) is played (spoken): the student is to write the English meaning. Then the story begins: speeches and pictures present a story which can be controlled at certain points by the student. Choices may be made as to where to go, what to buy, what price to offer, and so on. The student is encouraged to repeat the story, making different choices each time, in order to experience repetition with variations. Some embedded questions are contained in the lesson. A post-test

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identical to the pre-test is then given.

c) Hyperspeech: A pre-test is first administered in which sample vocabulary (both word and sentence level) is played (spoken): the student is to write the English meaning. Then the story or passage begins: each sentence or two ("chunk") is presented separately, with various aids available to the student to help him understand the passage. These aids are: translation, grammar, or cultural notes available as "hints"; a slower re-recording of the speech, at well less than native speaker speed; the display of the text of the speech on the screen as it is being spoken; and finally, if all else fails, an English translation of the "chunk". The student is free to make use of any or all of these aids, although some restriction is made as to the order in which they can be accessed. For example, the student must work through some of the other aids before the English translation is available. No questions are asked during the lesson. After the lesson, a post-test identical to the pre-test is given.

Summary of results

After taking all 3 lessons, students were asked to rank them: specifically they were asked 'Which lesson type did you prefer?' The hyperspeech lesson was preferred by 4 of the six who answered the question, the interactive story by 2 of the 4, and the drill (not surprisingly) by none. The interactive story lesson was second for 4 out of the 6. The drill lesson was ranked 3rd by two; the other 4 did not rank it.

After each of the lessons, each student was asked to fill out a "CAI Lesson Evaluation Form" (a copy of which is attached). Considering the questions that relate specifically to lesson type, the following conclusions can be stated:

- students rather disliked the vocabulary drill lesson, and found it boring, although it was at the right level for them and was not too long on average. They considered it to be rather ineffective. They would not recommend lessons of this type to others. Comments tended to complain that learning words in isolation was not helpful, and that the words would not stick with them. One student noted later that she encountered 4 of the words the following week and could not remember their meaning (although she did apparently remember that she had seen them).

- students liked the interactive story and the hyperspeech, and found them effective, interesting, and clear, if somewhat challenging. Audio quality was a problem to some. (The material for the hyperspeech lesson was taken from a cassette tape of marginal quality). There was a spread of opinion on the difficulty of the lesson, possibly reflecting the difference of abilities of the students. Overall, there do not seem to be any serious problems. Few comments were

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made regarding the interactive story lesson: students seemed well satisfied with it. A number of suggestions were made to improve the hyperspeech lessons, some of which were adopted in subsequent lessons, and others either rejected or remain to be implemented.

- in most cases, use of the system did not pose a problem. That is, instructions, choices, questions, and options in lessons did not cause any systematic problem. There were a few isolated problems caused by misreading directions, pressing the wrong key, and in a few cases, problems in the lessons themselves (which were fixed as they were identified). Since this was the first heavy test of the system, it was gratifying to see that in no case did the underlying software fail.

- the pre- and post-tests all showed significant short term learning of vocabulary, except for a couple of students who claimed that the hyperspeech lesson was much too hard. We are not satisfied with this method for testing, and feel that no claims about the comparative value of one lesson type over another can be made on this basis. Student comments that long-term retention is not guaranteed (or even probable) may be valid. Since the tests did not ask questions about the meaning of the stories as a whole, it is difficult to assess comprehension.

Part IV - Hyperspeech Lesson Development

A. Lesson Template Development

Comparison of the three lesson types indicated that the interactive story and the hyperspeech lesson types held considerable promise. The vocabulary drill type, if useful at all, would need considerable rethinking. We decided to concentrate on the hyperspeech type, for one reason: simplicity of lesson creation. The Interactive story lessons require considerable creativity and ingenuity in their design and construction. To create, in effect, a dramatic story with multiple realistic turns of plot is not easy; to create a set of such lessons is quite a trick. (However, control of vocabulary is easier, since the stories are written, rather than "found".) hyperspeech lessons, on the other hand, are quite mechanical to produce, once the raw material for the lesson has been identified. The lesson author has to 1) choose, transcribe and translate the passage, 2) break the passage down into appropriately sized 'chunks', 3) identify difficult vocabulary or grammatical points, and perhaps some relevant cultural notes for hints, 4) design the pictures used to illustrate the passage, and finally 5) record the speeches, hints, slow speeches, and translations. The elaborations to the 'bare' hyperspeech lesson which we ultimately decided upon are also straightforward and mechanical.

Over the course of about 6 lessons, the following enhancements to the basic hyperspeech framework were made:

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- more elaborate introductory material, specifying the source of the passage and giving a brief description of its content, subject matter, and of the testing method to be used. This material may function, in part, as an Advance Organizer (Ausubel). Some students commented that knowing what kind of test would be given helped them focus on the material.

- addition of a number of embedded questions between some of the language 'chunks'. The FLIS system allows both multiple choice and short answer questions, but we used exclusively multiple choice questions. If the student missed the question, the program would replay the speech that contained the answer, and the student could then try the question again. Again, students noted that having questions interspersed among the speeches introduced variety which kept them from automatically drifting through the material. Some noted (again) that knowing they would have to answer questions helped them focus and concentrate.

- the addition of multiple named hints. In the first hyperspeech lesson, there were only 2 hints per 'chunk'. The student was instructed to press a key to hear them, without knowing what he would hear. Understandably, this proved frustrating if he wanted to hear about X, but instead were told about Y (which he may well have known). We were able to devise a way to provide as many as 7 hints, and to label them on the screen:

1 = Siska 2 = grammar of "di- -kan" 3 = cultural note

One suggestion that would require a change to the software would be to allow the playing of a hint without the subsequent repetition of the speech for the 'chunk'. While repetition is doubtless valuable, it becomes an irritation at some point. Better to leave it under learner control.

- a complete, continuous playing of the passage before the breakdown into 'chunks'; that is, before the hyperspeech component of the lesson.

Thus, the final version of these lessons begins (after the lesson introduction) with an uninterrupted playing of the passage. The student listens to the whole thing without pause, to pick out whatever he can, unaided. Even if large parts are missed, this gives the student a preview, and helps him with the overall context and gives clues of what to listen for later.

- addition of a pre-test (after the continuous playing of the passage) and an identical post-test (after study of the hyperspeech potion of the lesson).

Typically this test asks for translations of a few of the vocabulary items in the passage, for a translation of a few of the sentences in the passage, and for answers (in

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English) to a few questions about the story (either factual and/or inferential). (See also notes on Testing in the next section.) At any time, the student can replay the whole uninterrupted passage. Care is taken to inform the student at each stage of the lesson what to expect, what is required, and what the available options are. Although we were able to complete only one such 'enhanced' lesson, informal comments by departing students lead us to believe that this is a successful lesson pattern.

Lesson Specifics

A brief description of the various (hyperspeech) lessons used follows:

Hunting: a dialogue between two Indonesian comics about how they hunted wild game in the old days. Separate pre- and post-test. 1 hint per frame (= 2 per set). No embedded questions.

Selling cloth: another comic dialogue relying on a pun. Students are to write an English summary. 1 hint per frame. No embedded questions.

Tua: a part of a modern Indonesian short story; some what abstract and surrealistic. Includes embedded questions. Multiple hints per frame. Test is to write English summary and do a aural cloze test.

Lagu: two Indonesian pop songs. Not a true hyperspeech lesson, but similar. No embedded questions or hints. Write English translation of songs as test.

Bakso: A story from a newspaper about a food stall whose popularity was due to flavoring by "ladies' underwear". No embedded questions; multiple hints per frame. Written English summary and both a written and aural cloze test.

Masalah Penduduk: a explanation of Indonesia's population problem and some attempted solutions. Has multiple hints per frame and embedded questions. Written English summary and both a written and aural cloze test.

Siska: A condensation of a modern Indonesian short story about a young girl's feelings of restrictions and alienation. Has multiple hints per frame and embedded questions. Uses story - pretest - lesson - post-test pattern as described below.

Part V - Testing Method Development

The difficulty of measuring foreign language comprehension without requiring foreign language production has already been mentioned. One way to reduce the difficulty is to ask questions and elicit answers in the learner's native language (English, in this case). Foreign language teachers generally do not encourage translation (or similar)

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activities on the grounds that it interferes with learning; that the student should learn to think directly in the target language. However, if it is important that we be able to gauge understanding, we think that translation type exercises are required (at least when restricted to written responses). If questions are posed in the foreign language, one can never be sure, in the case of a wrong answer, if the failure was a lack of understanding of the target material or the question itself. If the response is required to be in the foreign language, and is wrong, one cannot know if comprehension or production is at fault; that is, the student may have understood the passage, but not have been able to produce the correct answer. It is well known that learners' passive vocabulary and comprehension skills are more advanced than their production skills. In short, if we want to measure comprehension without involving other foreign languages skills as well, we must do the testing primarily in English, or ensure that the difficulty of questions and answers in the foreign language are carefully controlled and are well below the level of comprehension being tested. The level of such questions may well be set only by trial and error, a difficult and expensive task.

Another difficult problem in the assessment of students' comprehension of these lessons is the provision in the lessons for the playing of an English translation of each "chunk". Translations are provided for two reasons: first, many students use them to check the accuracy of their understanding. They find the confirmation of their understanding reassuring, and the instant correction of any misunderstandings valuable. Second, in the event that the meaning of the "chunk" remains obscure after all the other aids have been used, the translation provides an ultimate remedy, allowing the student to understand and proceed. We do force the student to access other aids before the translation, but it is always ultimately available.

The difficulty is that when we ask the student to explain the story, or infer something from it, we cannot say whether the (correct) explanation is due to the student's understanding of the foreign language or, in whole or in part, of the English. Some students commented that the requirement to summarize the passage was useless for just this reason. Others, however, commented that knowing they would have to summarize the story helped them concentrate. For less well-motivated students this requirement might help ensure that they pay attention to the whole passage.

This difficulty is not so apparent if we ask for a translation of a word, phrase, or sentence from the passage.

In summary, we feel that the English translation should stay. Granted that a student could use only the translations to answer the content questions, we think that if a number of questions based on the foreign language are also included, so that the content questions are not the only measure of understanding, a decent measure of the student's

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comprehension can be obtained.

In some lessons, we used a combination of several techniques. The following is a summary of testing techniques tried with an assessment of results.

- separate (identical) pre- and post-tests utilizing word/phrase translations. The word or phrase to be translated was played once; the student was instructed to write the translation on paper. This technique seems well-suited to measure vocabulary acquisition and to sample understanding at the sentence level. Usually the student shows considerable gain after the lesson. Possible flaws are 1) the gain may be only temporary; a delayed test on these items given later would be helpful and 2) the pre-test may help the students focus on the tested items during the lesson in preparation for the post-test. This latter flaw may encourage students to ignore non-tested items.

- English summary. As mentioned above, this technique suffers from the problem that the supplied English translations in the lessons may supply the knowledge needed to write a translation. In addition, some students find it useless and irritating for this very reason. On the other hand, this technique does help others attend to the lesson. In addition, the mistakes made in the summary are a valuable indication of what was misunderstood. Because of the advantages, we think that this technique could be used (perhaps not for every lesson) if some way could be found to reduce the students' negative feelings.

- Embedded questions. Short answer or multiple choice questions can be placed at intervals in the lesson. The correctness of answers to these questions can be recorded by the FLIS system and printed later. We chose to present multiple choice questions, displayed on the screen (i.e. the student read rather than heard them) in the foreign language. A conscious effort was made to use only simple vocabulary plus vocabulary from the passage in the questions and answers. Student comments on these questions were positive, citing the attention-focusing effect and feedback that they provide. The computer record of these questions indicated that only one student on one lesson (out of 11 student-on-lessons) missed any of the questions.

A possibly useful source of information on individual learning styles during these lessons was noticed while examining the printed output of these questions. Since the computer records each frame tried (as well as number of attempts at a question and the final correctness of the response), and prints frames not tried as dashes, we can see fairly easily which frames in the lesson were tried. It is apparent at a glance, for example, that some students rarely or never accessed the help frames (slow speech or text/translation) during certain lessons; others made heavier but not constant use of them, and a few methodically tried every available frame. One student tried every frame of a

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lesson until he became frustrated and quit it entirely before finishing. (His frustration was reported to me orally.)

- Cloze tests. Did not work well. We tried two types: visual (reading) and aural. A sample of two to three sentences from the lesson was either displayed on the screen or read aloud. Every seventh word was replaced by a (numbered) blank or a spoken number (in English). Students found these difficult and frustrating; the aural cloze was almost impossible. After trials in 2 lessons, this technique was rejected.

- Pre- and post-test in the lesson using various types of questions. This differs from the separate pre- and post-tests mentioned above in two important respects. First, the pre-test is presented after the student has heard the story once, without pause, all the way through. Therefore it is not limited to measuring what the student knew before the lesson, but can now ascertain both what the student knew before the lesson (vocabulary) and what he has understood without aid having heard the passage once. Second, since the student has heard the passage, we can now ask content questions as well as bare vocabulary and phrase translation questions. The difference between pre- and post-test then is a measure of what the student has learned from the lesson that he was not able to understand on his own. The two possible disadvantages of having identical pre- and post-tests mentioned above still pertain, however.

The test questions given include several types:

1. Vocabulary words displayed on screen; student to write English translation/explanation
2. Phrases/sentences from the passage played (one at a time); student to write translation of each
3. Factual questions about the story displayed on screen in English; student to write the answer in English
4. Inferential questions about the story displayed on screen in English; student to write the answer in English

Note: 3 and 4 might be asked in the foreign language if the vocabulary was kept simple. We have not tried this yet.

These enhancements, then, fit together as follows:

1. Directions and Introduction
2. Listen to the passage without pauses
3. Pre-test: answer questions about the passage
4. hyperspeech presentation of passage in "chunks" with aids; includes embedded questions; may be repeated at will
5. Post-test: identical to pre-test

Part VI - Summary of Student Questionaires

Following each lesson, each student was asked to fill

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out a "CAI Lesson Evaluation Form". The results were tabulated and examined. A copy of the form is supplied as an appendix. One general suggestion for the form is that an odd number of gradations be used in the future, so that students may mark an exact middle or neutral value. This section summarizes the results and adds comments:

Section 1: agree - disagree :: 1 - 6

1. I liked this lesson.
Vocabulary drill: average 4.42 = mild disagreement
Interactive story: average 1.44 = strong agreement
Hyperspeech range: 1.33 - 3.67; average 2.40 = ok

Hyperspeech lessons that were rated less 'likeable'
- were relatively hard or
- were subject to considerable difference of opinion or
- used the uniformly unpopular cloze test or
- were taken by few (2 or 3) people, one of whom was P, a uniformly critical student who nonetheless insisted on taking all possible lessons and claiming that each was impossibly difficult. (He was, however, enthusiastic about a children's story starring a naughty monkey. This story was not included specifically in this study.) Incidently, there was no correspondingly positive student in the study.

Note that 'like' may be taken to mean (in part or in whole) content, difficulty, testing method, or some other factor. Future versions of the questionaire might try to distinguish more clearly among these alternatives.

See also Part II questions which might reflect on overall 'likeableness'.

2. This lesson was at the right level for me.
Vocabulary: average 2.17 = mild agreement
Interactive story: average 2.89 = mild agreement
Hyperspeech range: 1.33 - 3.75; average 2.68 = ok

This question does not distinguish 'too hard' from 'too easy' in the case of disagreement. However, also see questions for Part II, which might be correlated with this.

There were few strong disagreements with this statement.

It is quite true that a couple of the lessons were in fact quite hard.

3. I kept wishing the lesson would end.
Vocabulary: average 2.47 = mild agreement (range: 1 - 5)
Interactive story: average 4.33 = mild disagreement
Hyperspeech: range 3.25 to 6; average 4.75 = disagreement

The vocabulary drill is fairly boring; still, some students did not find it impossible in this respect.

Most found the interactive story fine; 2 out of 9 found it too long.

A couple of the longer or harder hyperspeech lessons were found to be too long by some students. This may also be in part due to the forced repetition of each speech after a hint is played: if all hints are played, one may be forced to listen to the speech as many as 10 times. In general, however, the length of the lessons is not a problem.

4. Use of the equipment was sometimes a problem.
On all lessons: range was 3.75 - 6.00; average 5.34

In general, there is no systematic problem. Some of the specific problems were due to bugs in the lessons (wrong branch, etc.) which were quickly corrected. A few times, students hit the wrong key (i.e. Quit the lesson instead of request Translation). Audio quality (see 7 below) was sometimes a problem and may have affected answers to this question.

Given the fact.that students were given minimal introduction to the system, were presented with a different lesson type each week, and were generally hot and tired by the time they took the lesson, the lack of problems in this area is very encouraging.

5. There were times when I wasn't sure what to do next.
On all lessons: range was 4 - 6; average 5.04

Again, no systematic problem; a few specific isolated problems. Several were related to the tests (which changed in format almost every lesson).

6. More lessons of this type would be useful.
Vocabulary: average 4.57 = disagree.
Interactive story: average 1.67 = strong agreement
Hyperspeech: range 1.67 - 4.25; average 2.54 = agree

The vocabulary lesson was not seen as useful by most students.

The interactive story was seen as quite useful. More of these should be developed, we believe.

Hyperspeech varied considerably. Tua, with the lowest (4.25) rating here was probably the hardest (and strangest). It is not clear why Bakso, with the second lowest (3.33) was not seen as more useful. All other hyperspeech lessons averaged less than 3 on this question.

Note that 'of this type' may be ambiguous: it could be taken as lesson type, or content, or testing method to some degree.

7. Audio quality was sometimes a problem.
On all lessons: range 3.50 - 6.00; average 4.81 = mild

disagreement.

Overall this is not a serious problem, but in some lessons about half of the students indicated problems. Some of these were the lessons copied from an already marginal cassette tape recording. Others seemed ok to me. Possibly these comments relate to individual passages, not the whole lesson. Generally, we must be careful about audio quality: if not attended to, it can become a problem. Live recordings are usually better than tapes; if tapes are to be used, they must be of very good audio quality.

Also interesting is the fact that about half the students claimed no problem at all, even on the lower quality audio material.

8. Video quality was sometimes a problem.
On all lessons: range 4.75 - 6

Not seen as a problem. Of course, the focus of the lessons is on audio; still the pictures contain contextual clues and (at least) should not interfere. See also question 11.

9. I felt under too much pressure to get all the answers right during the lesson.
On all lessons: range 4.33 - 6

In the context of the summer, this did not seem to be a problem with these students. Different students, taking lessons for part of a grade may feel different.

10. I would recommend lessons of this type to others interested in learning the language.
Vocabulary: average 4.42 = not really.
Interactive story: average 1.63 = strong yes.
Hyperspeech: range 1 - 3.25; average 2.39 = yes.

Again, no to vocabulary, yes to the story, and yes to hyperspeech, with certain of the hyperspeech lessons getting only mild recommendation. Also, again, 'type' may be ambiguous.

11. The pictures were helpful if present.
All lessons: range 1.33 - 4.33; average 2.79 = mild yes.

In general, there is mild agreement here. Some individual pictures in some lessons are probably a bit confusing and could stand some improvement (e.g. unclear which picture is which character). Except for the vocabulary drill lesson, students had no lessons without pictures, and so no way to compare pictures vs. no pictures.

Section 2: 6 point scale between opposites: 6 ... 1

1. boring...interesting
Vocabulary drill: average 5.14 = pretty boring

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Interactive story: average 1.56 = pretty interesting
Hyperspeech: range 1.33 - 3.33; average: 2.25 = ok

Again, among the hyperspeech lessons, the harder lessons and those with P rated around 3; the others between 1 and 2.

2. ineffective...effective
Vocabulary drill: average 4.00 = somewhat ineffective
Interactive story: average 2.11 = ok
Hyperspeech: range 1.33 - 4; average 2.58

Similar to 1 above. Students tend to reject materials which they view as ineffective, so it is good to see that their reaction to this question is positive.

3. confusing...clear
Vocabulary drill: average 1.83 = clear
Interactive story: 1.44 = very clear
Hyperspeech: range 1.67 - 4; average 2.83 = ok

"Confusing" may refer to directions, speech, story line, or testing materials. This question needs to be clarified. Also, Tua, (4.00) is inherently somewhat confusing.

4. too hard...too easy
Vocabulary drill: average 3.2 = just about right
Interactive story: average 3.00 = just about right
Hyperspeech: range 3.75 - 4.83; average 4.32 = a bit too hard

The hyperspeech lessons were generally considered just a bit on the hard side, which was the intent. The student is expected to work and dig a bit to understand everything.

5. too long...too short
Vocabulary drill: average 4.20 = a bit too long
Interactive story: average 3.11 = just right
Hyperspeech: range: 3.33 - 4.75; average 4.08 = a bit too long

Again, removing the requirement to listen to each speech over again after each hint would help in this area, although a 4 is not a strong indication.

6. frustrating...satisfying
Vocabulary drill: average 3.00 = middle
Interactive story: 2.44 = rather satisfying
Hyperspeech: range: 2.33 - 4; average 3.36 = middle

For many of these lessons, the range of answers was large. Students disagree about this answer to a large extent. In each case it is not clear whether the frustration may be due to difficulty of vocabulary, testing, audio quality, etc. It is not clear either what aspect seems satisfying. This question might be better omitted or changed to be more specific.

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7. challenging...simple
Vocabulary drill: average 3.00 = middle
Interactive story: average 3.44 = middle
Hyperspeech: range 4.33 - 5.00; average 4.72 = rather challenging

There is general agreement that hyperspeech lessons are rather challenging, but not overwhelming. This is the intent.

Section 3: Features Useage

This section was not evaluated because it did not seem useful and because student responses appeared careless and erratic. We think we have a good notion of what features are used.

Part VII - Personnel Management and Training

A major part of the project consisted of managing and training the personnel involved in lesson production and lesson presentation.

Lesson production: an important factor in the eventual wider use of the FLIS system lies in the ability to train people in designing and authoring lessons. The details of this lie outside the scope of this summary; however some conclusions can be drawn at this point. To date, approximately 10 people have been trained in the design and creation of lessons. All have been able to master the system; approximately half after a week or two of training and practice, with others requiring several weeks. One or two never really became comfortable or proficient. Prior to this summer, training was done in the following sequence: introduction to the computer, operating system essentials, lesson design, and finally details of lesson implementation using the authoring system.

This summer a new author was trained in hyperspeech lesson creation in less than 3 days total time (spread out over two weeks), using a new approach. After a demonstration of a hyperspeech lesson and inspection of the hard copy data of the lesson, together with a diagrammatic explanation of how the lessons work, this new author was put to work on successive details of implementation using the authoring system. After having been led step by step through the creation of one lesson, and the modification of another, she was able to successfully complete an entire lesson on her own with minimal help in about a week of half-time work. Although my impression is that this individual is of above average ability, the superiority of this method seems clear. It leads us to believe that people can be trained in a limited amount of time to produce hyperspeech lessons quickly and independently. Further experience in and development of author training techniques would be an important component of making this system truly portable.

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Other personnel involved in lesson production were: native speakers to transcribe and do rough translations of lesson materials, native speakers to record the audio, and artists to produce suitable pictures for each part of each lesson. No serious or systematic problems other than the usual ones of coordination and communication were encountered.

Lesson presentation: traditional language labs typically require personnel to manage lab equipment and materials. At least at present, this CAI system is no different. We did have a lab assistant present at all times when students were taking lessons, to locate and load the various disks for each lesson, and to provide assistance to students in the event of confusion or trouble with the equipment. The latter function was especially important since we did not have time for a leisurely introduction and orientation for the students.

The person hired had considerable experience with micro-computers, and had no trouble learning what was required. About 2 hours of initial orientation and training were given, followed by occasional brief supplementary consultations.

It had been hoped that this person could also observe students taking lessons in some systematic fashion to determine problems, styles of using the lessons, etc., but this proved impossible. Requests and questions came at unpredictable intervals, and prevented this kind of monitoring. In the future, if any systematic observation of students taking lessons is desired, a specific person with no other duties at that time will have to be present.

Part VIII - Proficiency Exam

In accordance with one of the aims of the grant, we developed a prototype listening comprehension test. Twenty multiple choice questions ranging in difficulty from simple (typical greetings) to complex (level of educational reform in country X) were developed. Each question took the form of a statement in the foreign language; then 4 possible responses to the statement were played. The student was then to choose the most appropriate response. The lesson, originally developed in English, was then translated (with minor modifications allowing for language and culture variations) into the 7 Southeast Asian languages taught at SEASSI, and every student was asked to take the test for the language he or she was studying. Not all actually showed up, but approximately 80 students took the test.

In order to validate the tests, teachers of each class were asked to rank their students (who took the test). Detailed results are included in an appendix. A brief computation of rank correlations for each class follows:

1. Beginning Thai: 5 students rho = .38
2. Intermediate/advanced Thai: 9 students rho = .64

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3. Burmese: 6 students rho = .98
4. Tagalog: 7 students rho = .79
5. Lao: 6 students rho = .70
6. Khymer: 14 students rho = .76
7. Vietnamese class A: 5 students rho = .97
8. Vietnamese class B: 5 students rho = -.40
9. Vietnamese class C: 5 students rho = .50
10. Indonesian (not yet available)

In general, these are strong positive correlations, indicating that the test agrees with teacher evaluations. The relatively low correlation for the beginning Thai class is not readily explainable, except that with small samples, one or two major disagreements would cause a significant drop. One or two students getting lucky could also have significant effect. The negative and low values for Vietnamese classes B and C are probably due to the fact that the teachers' for these students spoke a different dialect than that used in the test.

Altogether these figures suggest that the prototype tests are quite valid, and could be used to quickly judge an individual's listening comprehension level. For additional details, please refer to the appendix, which was prepared by the SEASSI language coordinator.

Part IX - Conclusions and Recommendations

- have students take lessons under better conditions: not when they are tired and hot.

- provide some extrinsic motivation (grades)

- abandon or redesign vocabulary drill lessons

- develop more interactive story lessons as opportunity and authoring talent are available

- develop more hyperspeech lessons similar to the last one described. Decide upon and standardize the test method.

- try some hyperspeech lessons for beginning students. These would have to be written, not 'found'.

- modify the program so that the main speech is not automatically repeated after each hint is played.

- look at frame usage patterns as displayed in lesson statistics printout.

- improve and clarify questions on the CAI Lesson Evaluation Form.

- watch audio quality carefully

- develop and test training for new lesson authors. This really could use a full ID treatment, if resources were

made available.

Appendices

1. Sample CAI Lesson Evaluation Form
2. Summary of CAI Lesson Evaluation Forms
3. Proficiency Test Summary
4. FLA paper: "Computer-Controlled Random Access Audio in the Comprehension Approach to Second Language Learning"

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Appendix II: Saumple FLIS Pictures (reduced)

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]CATALOG

DISK VOLUME 254

 A 002 HELLO
 B 034 TEMPLE1.PIC
 B 034 TEMPLE2.PIC
 B 034 TEMPLE3.PIC
 B 034 OUR TEMPLE1.PIC
 B 034 OUR TEMPLE2.PIC
 B 034 TEMPLE5.PIC
 B 034 TEMPLE4.PIC
 B 034 TEMPLE6.PIC
 B 034 TEMPLE7.PIC
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 B 034 TEMPLE11.PIC


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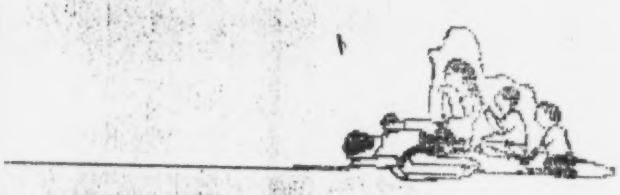

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Temple11.pic

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Temple2.pic

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Our Temple 1. PIC

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Vol 51
our Temple 2

Vol 51
Temple 5. Pic

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Temple4.pic

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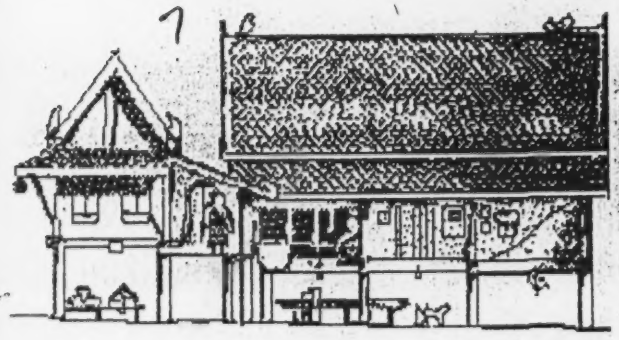

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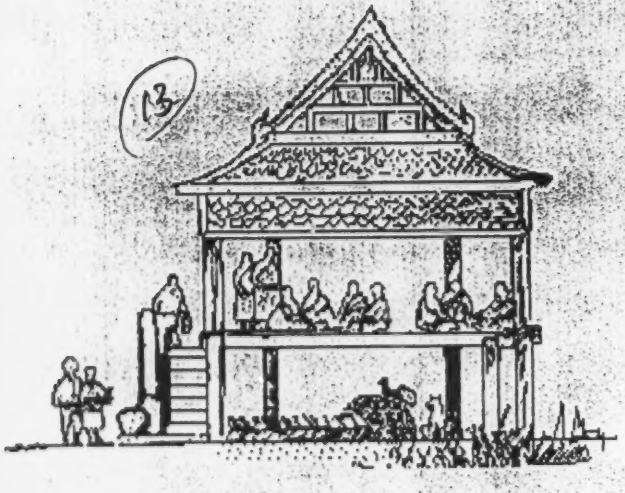

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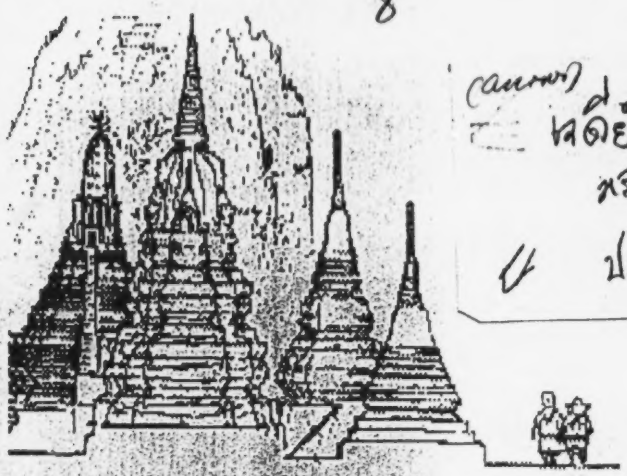

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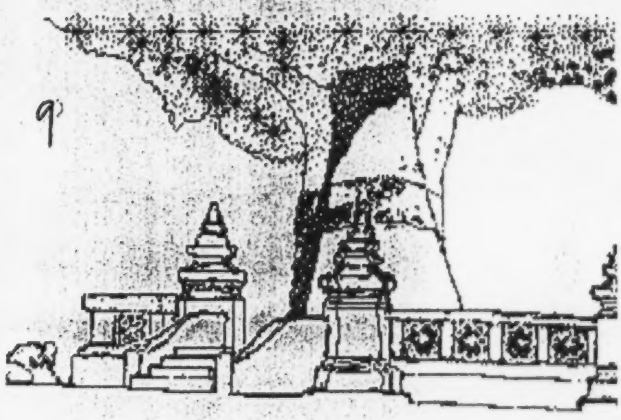

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Temple 9.pic

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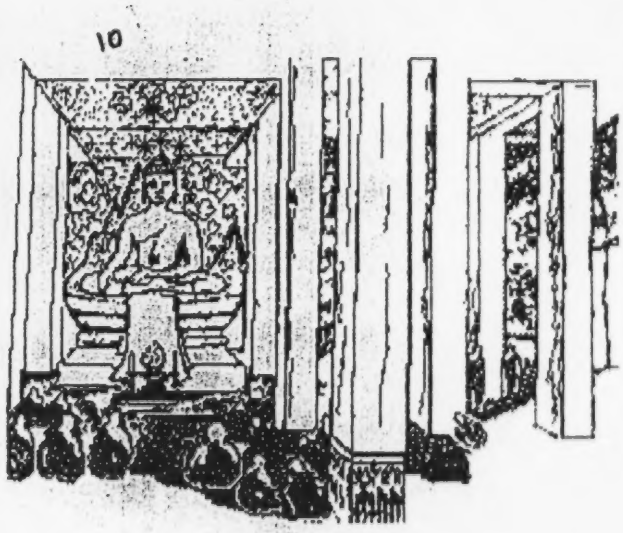

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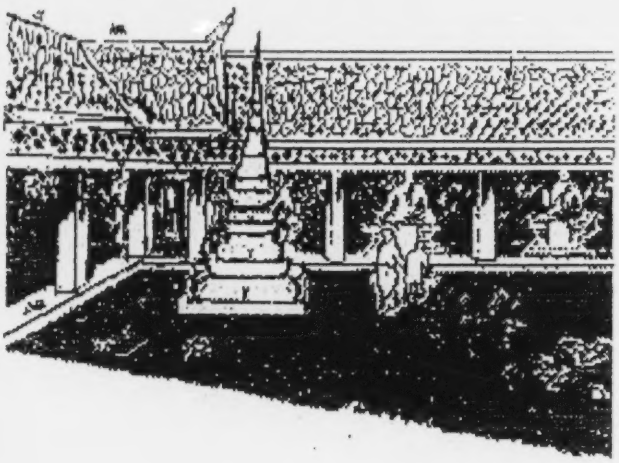

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Appendix III: FLIS Listening Proficiency Exam Experiment
(Summary published in COTSEAL Bulletin, 1988)

tenth week. In addition, [the 1987] SEASSI used an unofficial proficiency standard whereby each supervising teacher, in consultation with his or her colleagues, gave a rating similar to the FSI scale of each student's actual performance in the four modalities. Copies of the proficiency ratings will be sent on to Hawaii. In instances where a student is continuing through several years of SEASSI, it will prove useful to be able to track his/her performance over time and, perhaps much later, to use the same records to study attrition.

Prototype Listening Comprehension Test

In a rather interesting experiment just before the close of the 1987 SEASSI, a pilot project was designed to see what potential the NIU Computer-Aided-Instruction (CAI) system had for proficiency testing purposes. With funding from a grant from the U.S. Department of Education, SEASSI supervising teachers of the major languages were paid a modest stipend to assist in design, translation and recording.

Twenty multiple choice questions ranging in difficulty from simple (e.g., greetings, apologies) to complex (e.g., educational reform in country X) were developed. Each question took the form of a statement in the foreign language; then four possible responses to the statement were played. The student was then to choose the most appropriate response. The lesson, originally developed in English as a convenient starting point, was then translated (with minor modifications allowing for language and culture variations) into seven of the nine languages taught at the SEASSI. Every student was asked to take the test for the language he or she was studying. Not all actually showed up, but approximately 80 students took the test on an individually scheduled basis. The text took 20 minutes and was scored automatically by the software.

In order to validate the tests, teachers of each class were asked to rank their students who actually took the test in global terms, best to weakest in general language proficiency. A brief computation of rank correlations for each class follows:

1. Beginning Thai	5 students	rho = .38
2. Intermediate/Advanced Thai	9 students	rho = .64
3. Burmese	6 students	rho = .98
4. Tagalog	7 students	rho = .79
5. Lao	6 students	rho = .70
6. Khmer	14 students	rho = .76
7. Vietnamese, class A	5 students	rho = .97
8. Vietnamese, class B	5 students	rho = .40
9. Vietnamese, class C	5 students	rho = .50
10. Indonesian	(teacher correlations incomplete)	

In general, these are strong positive correlations, indicating that the test agrees with teacher evaluations. The relatively low correlation for the beginning Thai class is not readily explainable, except that with small samples, one or two major disagreements would cause a significant drop. One or two students getting lucky could also have significant effect. The negative and low values for Vietnamese classes B and C are probably due to the fact that the teachers for these students spoke a different dialect than that used in the test. Altogether these figures suggest that the prototype tests are quite valid and could be used to quickly judge an individual's listening comprehension level. Used over time, and in conjunction with other tests of proficiency (e.g., a CAI reading proficiency exam), a reasonably accurate profile of each student's language competency could be maintained for a number of purposes: placement, diagnostics, course design, etc.

Some of the students who took the CAI listening proficiency test made the important point that, in retrospect, their course of **instruction had not really emphasized development of higher-level listening skills** being tested by the computer. They were enthusiastic in recommending more focus being placed on such training (such as is done at the Defense Language Institute and the Foreign Service Institute). Finally, we note

• frames / Speeches Script — English Proficiency

Frames 1 : TEXT FILE A TO DISPLAY

PATTERN

Part A: Input/instructions are in English
Student responses are in the target language.

Instruction: Listen to a social situation given in English. It will be followed by 4 statements in the foreign language you know. You will indicate which one of the 4 is most appropriate response to the given situation by choosing A, B, C, or D. [CR]

PRESS RETURN KEY

(NOTE TO THE EXAM PREPARER: The choices A-D are in the target language. Please change the choices to make them suitable to the target language and culture in order to insure test validity. The English given here is suggestive of what is appropriate in English only and may not translate into the target language without distortion of test results or produce unnatural language.)

For sake of consistencey across languages, please follow the format for the CORRECT ANSWER (A-D)

Frame 2 Sp. 1 Choice

I. You are a foreign student. You see a woman professor on campus. You greet her by saying:

(Test preparer: Translate the following suggested responses into the target language; change the content/structure of the responses make them appropriate to the target language, if you wish.)

A. How's it goin'? B. Hey, man! C. Good morning, professor. ✓
D. Are you o.k.? (C is the correct response.)

F-3 Sp. 2

II. You help a crippled person cross a street. He thanks you by saying, "--thank you----------." You respond by saying:

A. (target language) Mean I help you? B. Are you crippled?
C. correct response You're welcome. D. You're crippled.

F-4 Sp. 3

III. You are in a bus and you step on the foot of an elderly lady behind you. You say to her:

A. TL correct response Excuse me, I'm very sorry. B. Did you step on my foot?
C. Why are you a the bus? D. Are you sorry?

F 5 Sp. 4

IV. You see an empty seat at a table in the school cafeteria. A girl of about 18 years of age is siting there by herself. You would like to sit there, so you say:

A. TL Is this your table? B. correct Do you mind if I sit here? C. Why are you eating? D. Please move to another table.

F6 Sp. 5

V. A waiter in a restaurant asks you what you would like. You say:

A. TL I'd like to order a restaurant. B. I don't need a waiter.
C. Do you have food under the table? D. correct I'd like to see a menu.

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Frame 7 TEXT FILE 2 TO DISPLAY

Pattern

Part B. Instructions are in English. Situational input, dialogs, and responses in FL.

(English) Instructions: Listen to the dialog and choose the response which best completes the dialog.

(Target language follows.) PRESS RETURN KEY

F 8 VI. At a bus stop. X: Excuse me. Does this bus stop at the American Embassy?
Y: No, it doesn't. You have to take bus number 44.

Specan 6

Choice

(TEST PREPARER: CHANGE THE RESPONSES TO SUITABLE T.L. SITUATION.)
Correct response is in bold face.

A. You're right, sir. B. Excuse me. I don't know.
C. **Thank you very much, sir** D. You're welcome.

F 9 VII. At a company office.

Specan 7

X: What room is Miss Suchada in?
Y: In that one, sir. Walk straight ahead; it's on the left.

A. Yes, it's that room. B. I don't know.
C. Thanks for asking. D. **Oh, yes. I see which one.**

F 10 VIII. In a classroom.

Sp. 8

Teacher: I would like you students to hand your homework in on Monday.
Student X (who will be absent on Monday) says to the teacher:

A. I can't come home, professor. B. Can my friend write it?
C. Are you kidding? D. **May I hand it in on Tuesday, professor?**

F 11 IX. In a dentist's office.

Sp. 9

Dentist: What seems to be the problem?
Patient: I have had a toothache for three days now.

The dentists then says:

A. I'll buy 3 small tubes of toothpaste.
B. Is it a false tooth?
C. **Open your mouth and I'll have a look.**
D. Sorry, this isn't a dentist's office.

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F 12 X. At a railway station.

Sp 10 X: Where are you going?
Y: I'm going to Singapore.
X: What class train?

Y says
A. Four persons B. The express train.
C. **Second class** D. By the evening train.

TEXT FILE C ✓ Press Return (PATTERN)

F 13
F 14 Part C. Everything is in the target language.

Sp 11 ✓ XI. There is a knock at the door. You open the door and see a friend. You say:

CHOICE
A. **Hey, why are you here?** ✓ B. Hello. May I help you?
C. Please come in and sign your name.
D. Thanks for the door.

F 15 XII. You meet a friend. Her father has just died. You say:

Sp 12 ✓
A. **I'm sorry to hear that.** ✓ B. Congratulations!
C. I am most grateful. D. Please make yourself at home.

F 16 XIII. You see a vendor (female) selling bananas. You would like to buy some. You say:

Sp 13 ✓
A. Oh, are you selling bananas today?
B. **How much are these bananas?** ✓
C. Are these bananas for sale?
D. Who is selling these bananas?

F 17 XIV. You are in a police station. You have lost your wallet and passport. The police officer asks you if you can remember your passport number. You say:

Sp 14 ✓
A. I don't remember where I lost it.
B. Yes, it's here in my wallet.
C. No. I can't remember the number. ✓
D. It's none of your business.

F 18 XV. You go to a bank to open an account. You ask the bank officer:

Sp 15 ✓
A. Can I buy this bank? B. **Where do I go to open an account?** ✓
C. Where can I withdraw my money now? D. I'm out of money.

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Fr. 19 ✓

Sp. 16

XVI. You are engaged in a heated debate about a politician in which you are describing how corrupt he is. A girl in the group politely says to you that the politician you happen to be talking about is her uncle. The best thing you should say in response to her without damaging your relationship too much is:

A. So you are a member of this corrupt family too?
B. I am sorry that my uncle is corrupt.
C. Is your uncle really in politics?
D. **I'm sorry, but I didn't know you were related.** ✓

Fr. 20

XVII. Your mother asks you to invite your boss to a house-warming party she is organizing. You tell him:

Sp. 17 ✓

A. Could you pick up some beer for me?
B. **My mother would like you to come to a house-warming party on Sunday, if you are not too busy.** ✓
C. My mother says that if you don't come to the house-warming party, I should get a new boss.
D. If you come to my house-warming party, you can meet my boss.

Fr 21

Sp 18

XVIII. A colleague or clasmate asks you to comment on his paper on the most recent election. You do not want to be dishonest, but the paper is very poorly written. You say:

A. It's obvious that you know nothing about politics.
B. Why don't you ask your boyfriend to read it? It's boring.
C. **You've got some good ideas in your paper, but it needs more re-writing.**
D. I'll give you some comments, but it will be expensive.

Fr 22

Sp 19

XIX. There is a debate between two extremes of the political spectrum on how to improve the educational system in your country. You are a moderate and offer this opinion:

A. I think that we should abolish the requirment of compulsory education of 8 years minimum.
B. The Minister of Defense should be allowed to destroy all village schools and move children into provincial centers.
C. I never went to school and I see no reason why education is necessary for others.
D. **I firmly believe that we could improve education by increasing teachers' salaries and funding more educational research.**

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fr. 23 XX. You need to look at records in the National Archives on the negotiations between the British government and a SE Asian sp. 20 government prior to the Second World War. The official there tells you that you need special permission to see the documents. You say:

A. I need to see these documents today and can't be bothered with red tape.
B. I am a well-known writer and should not need permission from anyone.
C. **In that case, can you tell me how I proceed to get permission?**
D. In my country, we don't need permission to use the National Archives.

(Please keep this exam confidential. Lock it up or throw it away, if you do not intend to use it. Once it is in students's hands, it is no longer valid at all and we will need to construct a new one at new cost in time and labor. - - - Thanks.)

Last sector for English 1967

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Student Answer Sheet: To be used in trial test in classroom or in Language Lab.PB

Name:_____
Language:_____Level:_____

Instructions: Listen to the instructions, situation or dialog and then choose the most appropriate response A, B, C, or D.

1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b	c	d
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
9.	a	b	c	d
10.	a	b	c	d
11.	a	b	c	d
12.	a	b	c	d
13.	a	b	c	d
14.	a	b	c	d
15.	a	b	c	d
16.	a	b	c	d
17.	a	b	c	d
18.	a	b	c	d
19.	a	b	c	d
20	a	b	c	d

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PLEASE TRY THIS ROUGH DRAFT OUT WITH SOME OF YOUR STUDENTS (3-4) ORALLY IN CLASS USING PENCIL AND PAPER. STUDENTS WRITE A/B/C/D. (Use a separate answer sheet. Do not give copies of the exam to students.)

!!!You may change the suggested responses to more suitable ones in your particular language. Do not stick to an exact translation of the original English, if you think it will produce invalid test results.

John F. Hartmann
Language Director, SEASSI 86/87

SEASSI 1987

Rough Draft: Proficiency Exam of Communicative Competence
Comprehension-Based Computer Assisted

Introduction: This is a 20-item exam of listening comprehension using live speech recorded on an Instavox disk. Each of the 20 items includes some information or dialog about a meaningful situation covering a wide range of competencies. After the student hears the situation described or the short dialog, he or she will hear 4 choices, labeled A, B, C, D. The correct response is indicated by typing one of the four letters. The student's performance will be computed automatically by the computer and a print-out of the performance for the entire class will be available.

Note: This exam is only one of several instruments that can be used to probe a student's proficiency. Moreover, it tests only one dimension: listening comprehension, which would include aural memory. It should be used with other tests: face-to-face interviews, in-class tests of comprehension of listening and reading, and tests of production in speaking and writing.

(The development of this proficiency exam is a research project funded by the U.S. Dept. of Education.)

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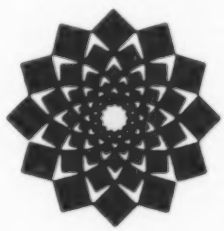
Appendix IV: Dissemination (offprint)

Modern Technology in Foreign Language Education:
Applications and Projects

Edited by Wm. Flint Smith

In Conjunction with the American Council on the Teaching of Foreign Languages



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6

FLIS: Random-Access Audio and Innovative Lesson Types

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Introduction

Most computer-aided instruction (CAI) for foreign language is altogether silent, depending entirely on mute text and occasional graphics to instruct and aid the learner. A few systems incorporate a tape recorder, which either forces a rigid, invariant lesson design or requires the learner to endure delays of up to half a minute before hearing a desired speech segment. CAI systems that incorporate interactive video are a promising alternative, but they will be expensive, probably will not be customizable, and commercial versions will not be available for the less commonly taught languages due to high production costs.

The Northern Illinois University Foreign Language Instruction Station (FLIS) is based on a computer-controlled random-access audio device called the Instavox and consists of a complete lesson authoring and presentation system that can record and play back high-quality audio segments (speeches) in conjunction with computer-displayed text and graphics. Any audio segment specified by the lesson author or chosen by the learner can be accessed and played with no delay at any time during the lesson. Speech samples of any desired content can be provided by the lesson author and can be called up by the student at will as the lesson progresses. These audio segments might include hints, translations, cultural notes, interactive feedback messages or slower and more distinct re-recording of the original natural language segment.

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With a moderate investment in equipment, training, and time, any individu or institution can create, modify, and use FLIS-mediated interactive aud lessons for any language (or any subject where audio via Instavox is a usef added dimension in the presentation of instruction). A preliminary versio of the FLIS system was completed in mid-1985; presently some ten author have been trained to write materials on the FLIS system, only two of whom have had any significant previous computer experience. While the rate varie with which individuals master the FLIS authoring protocols, in most case a week or two of training and practice are sufficient; moreover, the authoring process is entirely menu-driven. Thus, no knowledge of computer programming is necessary.

This report offers first a brief description of the equipment and software that composes FLIS, including specific features seen by both lesson authors and students, and then characterizes two innovative lesson types ("interactive story" and "Hyper-speech") designed to improve listening-comprehension skills. The report concludes with some comments on evaluation efforts to date.

The FLIS System

Equipment

The current FLIS system consists of four workstations, each equipped with an Apple IIe computer and an Instavox (a direct-access audio device). The four workstations are connected by a Corvus network to a Corvus Hard Disk Drive, which holds the FLIS computer programs and student records. The data needed for an individual lesson are stored on two standard floppy diskettes, one containing pictures for the lesson, and the other holding information about sequencing of lesson material, speeches to play back, specific feedback for given responses, etc.

The audio component of the lessons is provided by the Instavox, which accomplishes what would be impossible with a tape recorder—instant access and replay of any speech at any time during the lesson with a delay of less than half a second. The Instavox is similar to the conventional floppy-disk drive of a computer but employs a Mylar disk 15 inches in diameter that holds up to thirty minutes of recorded (as opposed to machine-generated) human speech in which all the nuances, tones, and rhythms of language are reproduced faithfully.

At each workstation used in the teaching of Indonesian and Thai at the NIU Southeast Asia Center, the Instavox is controlled by the computer using lesson data that indicates corresponding software programmed to store the exact location of the beginning and ending of each speech segment. Access to audio segments is random in the sense that requests to play back speech samples may be made in random order and may differ from one use to another in the lesson. In this fashion, the lesson author may choose to have

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speech samples played or replayed in an order that depends on the particular responses of the learner, or the learner may be given some degree of control in the progress of the lesson, perhaps electing to hear optional hints or translations that are made available, or choosing to repeat or skip certain optional sections of the lesson at will. In either case, the Instavox audio device is able to access these random locations with virtually no delay. Immediate access and playback result in a significant saving of learner time and a greater efficiency in the learning task when compared to other systems, such as the random-access tape recorder, which demonstrate delays of up to ten seconds to access a given speech.

The Authoring System

Creating a lesson for the FLIS system is a two-part task. The lesson must be planned carefully, bearing in mind the capabilities of the system as well as its limitations. The general lesson type is determined first (four have been developed so far: drill, tutorial, interactive story, and "hyper-speech"; the latter two are described below), then individual "frames" are designed as needed. Each frame constitutes a single computer-student interaction; for example, a single frame may consist of presentation of material, followed by a question, the student's answer, and the computer's response to that answer. Frames may include multiple-choice or short-answer questions or may offer a choice of what happens next (for example, a branch at a new section, the playing of a hint), or may require no action at all from the learner. Along with this detailed planning of the scope and content of the lesson, the author may choose to provide more or less detailed remediation or feedback to incorrect answers. In addition, a script of speeches and pictures to be used at each point of the lesson must be prepared.

Once an author has produced one lesson of a given type, subsequent lessons are more easily created, since the underlying framework will be familiar, although the content and details may be quite different.

After the lesson is planned and scripted, the actual production is made easy by the FLIS Authoring System. The system is entirely menu-driven and requires only that the author know what should happen in the lesson at each point. All lesson data can be imprinted for later reference, and all data can be changed at a later time, if desired. This circumstance means that the lesson itself can be modified in light of difficulties or shortcomings discovered in the course of formative evaluation. Typical information for a frame might include the following: the speech, text, and picture to use in the "presentation" part of the frame, the specification of possible correct and wrong answers, and the response the computer should give for each answer. The computer's response can be (1) none (in which case the lesson proceeds to the next frame), (2) a message displayed on the screen, (3) an audio message, or (4) a branch to a set of remedial or speech feedback frame(s) for that particular answer.

Especially noteworthy is the Instavox component of the authoring system which controls the recording of speeches. This, too, is menu-driven, and allows either live recording of individuals or the copying of segments of audio tape or cassette to the Instavox disk. The author simply taps the computer's space bar to initiate the recording (or copying) process and then taps it once again to stop. Audio segments may be recorded automatically one after another, or the recorded segment can be replayed instantly by tapping a key; if the recording proves unsatisfactory (too loud or soft, not lively enough, background noise, the last syllable cut off prematurely, etc.), the speech samples can be re-recorded and validated instantly. In addition, a given speech segment can be re-recorded at a later time or additional speeches added to the lesson. The extreme ease of creating and editing the audio materials for a lesson contrasts sharply with other video or CD-ROM devices.

Lessons

Each FLIS lesson may be included in a number of "courses" of lessons and made available to students. Each student is registered in a specific section of a given course. A choice of up to thirty lessons is displayed for each course with an indication of which lessons have been tried previously by the particular student. Once a choice of lesson is made, the student is responsible for obtaining and inserting the two floppy disks and the Instavox disk into their respective machines, and the lesson begins. At the end of the lesson a summary of the student's performance is displayed on the screen and written to a permanent file on disk, and the student is returned to the course menu to retake the lesson, choose another, or quit.

A primary challenge for authors who design lessons for the FLIS system is to go beyond traditional drill or tutorial lessons to other types that make use of the unique capabilities of random-access audio. While traditional lesson types are useful to a degree, the Instavox capacity for random-access audio invites teachers to create lessons that can take fuller advantage of the computer's capacity for interactive instruction.

Two innovative lesson types for FLIS developed at Northern Illinois University that appear to have great promise are "interactive story" and "hyper-speech." Both are explained more fully in Henry, Hartmann, and Henry (See Reference).

The Interactive Story

Interactive story lessons were inspired by the structure of the series of "Choose Your Own Adventure" stories written for children. In these books, at the end of each page the reader is invited to choose what will happen next and, depending on the choice, is instructed to turn to a particular page.

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In short, the reader "branches" through a series of alternatives, whose election at each point determines the subsequent story line and its consequences. The story, then, has many variations, and can be read many times, each with a different outcome.

The extension of this concept to FLIS-mediated lessons is straightforward; the computer poses choices to the student at various points in the interactive story lesson and, based on the student's response, continues with the chosen part of the plot. For example, in one such FLIS lesson, the student takes the part of an Indonesian child sent to the market to buy fruit for a guest. At various points in the lesson, the student must make choices for the child in accordance with what is heard: which kind of fruit to buy, whether to buy at the offered price or to bargain; whether to accept a lower offer or to walk away (in hopes of a still lower offer); whether to buy some fruit that is not quite sweet enough, etc. At each point the student sees a picture of the situation and overhears the voices of the child and the sellers. Not all frames are "choice" frames; in some the narrative is interrupted and the student is asked a question (Does the child have enough money to accept the seller's offer?); in others the student may simply be asked to listen and understand perhaps with the aid of optional hints or translations.

Students are encouraged to undertake lessons of this kind several times, each time making different choices. In this way, a considerable amount of repetition of lexical items and syntactic patterns is experienced, but the repetition is cloaked in sufficient variety to prevent boredom. The interest inherent in discovering the unknown consequences of the choices appears to be a powerful motivating factor if the "plot" is cleverly constructed. An additional attraction of interactive story lessons of this type is the ease with which the consequences of actions in different cultural settings can be illustrated unobtrusively. For example, in Western culture, bargaining is rare, and the strategy of walking away from the seller to elicit a lower offer is not widely practiced. In the FLIS-mediated interactive story lesson, this situation (and others of cultural contrast) may be presented and the results of various actions demonstrated in a vicarious but dynamic fashion.

The Hyper-Speech

In its pure form, the hyper-speech lesson gives the student a set of speech segments to understand and, for each such segment, a set of instantly available aids to comprehension. Aids may include the following:

1. Instant repetition of the speech segment
2. A set of audio hints (lexical, grammatical, or cultural notes)
3. A picture illustrating the situation
4. A slower, clearer re-recording of the original speech segment
5. The text of the speech segment displayed on the screen
6. Written notes about the speech displayed on the screen

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7. A translation of the speech segment, spoken or displayed
8. A glossary of unusual words in the lesson

Typically, a learner is required to access some of the less complete aids before full text display and translation will appear, but other than that restriction (which need not be followed by the lesson author), students are free to attack the audio passage as they please. Evaluators engaged in on-site observation of students working with hyper-speech lessons have noted that some learners prefer to repeat the passage many times before calling up any of the aids; others turn almost at once to the re-recording and then back to the original. Still others exhaust all available hints before continuing. Students exhibit considerable perseverance in trying to comprehend as long as the listening passages are not too far beyond their ability; perhaps more important, students report that the lessons are enjoyable and seem very worthwhile. This positive evaluation can be ascribed, perhaps, to these reasons: mature students apparently like the fact that they are in control of their own learning, and can set the pace of the lesson and the details of their interaction with it. In addition, the nature of the materials and the way they are presented offer the user a clear sense of accomplishment in understanding samples of authentic foreign language instead of the controlled and contrived speech typical of classroom language. Finally, the materials reflect the full range of environments where speech is natural, purposeful, and functional (taped conversations, commercial recordings of comedians, news broadcasts from the radio, songs, plays, etc.) and where the content is clear, relevant, and interesting. Hyper-speech lessons are probably not suitable for beginning students, but seem clearly suitable for students at the intermediate level or above. The concept may be applicable for beginning learners, however, with carefully selected (or crafted) materials and their equally careful workup for use on FLIS with special attention to the hints and other aids appropriate for beginning students.

Evaluation

Lessons that incorporate direct-access audio presented by an interactive computer system appear to be effective and highly motivating to students learning foreign languages. The equipment and time necessary to produce these lessons, while far from negligible, are moderate compared to any other presently available medium that can claim usable random-access audio capability; moreover, they are not beyond the means of many secondary schools or institutions of higher education. The Northern Illinois University Foreign Language Instruction Stations, together with the lesson types that have already been developed, constitute a viable means to explore further the possibilities of random-access audio in all levels of second-language learning.

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